USWRP Test Bed Meeting: NOAA THORPEX contributions

Wednesday, 5 May 2010 (end of test bed meeting; see full test bed meeting schedule at http://www.esrl.noaa.gov/research/uswrp/events/2010/workshop/agenda.html)

3:00 PM – 3:45 PM THORPEX overview (introduction by Roger Pierce; past NOAA THORPEX results and Test Bed interactions, presented by Zoltan Toth, future THORPEX research and Test Bed interactions by Tom Hamill)

3:45 – 4:15 Discussion on THORPEX – Test Bed Interactions, including possible future THORPEX-Test Bed joint RFPs.

NOAA THORPEX Principal Investigators Meeting

Wednesday, 5 May 2010

6:00 PM: NOAA THORPEX group dinner at the Med restaurant, 1002 Walnut St; http://www.themedboulder.com/index.html .

Thursday, 6 May 2010

8:00 AM: Post-processing session. 30-minute talks (20 minutes talk , 10 minutes Q&A) on results from this grant cycle's PI's (Bo Cui and Paul Schultz). Any other brief (5-minute) materials on post-processing from other contributors. Discussion about how we can facilitate collaborations on post-processing research across NOAA through THORPEX. How to formulate a coordinated plan for post-processing, how to support key upcoming aviation/severe weather needs in era of NEXGEN. What are the next steps?

10:00 AM: Coffee Break

10:20 AM: Data assimilation session. 30-minute talks (20 minutes talk , 10 minutes Q&A) from this last grant cycle's PI's (Jeff Whitaker and Mozheng Wei). Any other brief (5-minute) materials on data assimilation from other contributors. Discussion of data assimilation collaborations between NOAA THORPEX (ESRL and EMC) and NASA; discussion of data assimilation collaborations between THORPEX and HFIP. Possible future collaborations with GFDL, Navy, Air Force, NCAR on data assimilation.

12:15 PM: Lunch

1:15 PM: Model error session: 30-minute talks (20 minutes talk , 10 minutes Q&A) from last grant cycle's PIs (Jian-Wen Bao and Dingchen Hou). Any other brief (5-

minute) contributions on model error. Discussion of how to make progress and facilitate collaboration on model-error parameterization research and development.

3:00 PM: Break

3:15 PM: Observations: 30-minute talks (20 minutes talk , 10 minutes Q&A) from last grant cycle's PIs (Gary Wick and Yucheng Song). Discussion of key issues in future THORPEX work on observations (adaptive thinning; possibly new inexpensive sensors; role of OSSEs in evaluating impact of future observing systems). Future directions.

4:45 PM: Wrap-up summary (Hamill). Final discussions. Recommendations for how NOAA THORPEX should evolve. Key priorities for research in THORPEX collaborations with Hydromet Test Bed in 2011.

5:30 Adjourn

2nd Winter T-PARC Workshop

(After THORPEX PI workshop, in addition to the 2nd NOAA Test-bed/USWRP Workshop, May 3-6)

7 May 2010

(All Times: MST)

ESRL, Boulder, CO

Meeting Objective: *Review the field phase of Winter T-PARC, as well as related research, including studies on dry and moist processes of storm initiation/formation/development stages, meso-scale storm structure studies of the storm at different stages, forecast error growth, socio-economical benefits of improved forecasts, Rossby wave packet studies and adaptive observation with enhanced conventional observing network, and the evaluation of the impact of targeted observations on forecasts of high impact weather events.*

Logistics: The Winter T-PARC workshop will take place after the 2nd NOAA Testbed/USWRP Workshop (May 3-5, 2010) and the THORPEX PI workshop (May 6) at ESRL, in Boulder, CO. http://www.esrl.noaa.gov/research/uswrp/events/2010/workshop/

Background Information: Winter T-PARC was an international field campaign led by NOAA and joined by researchers from agencies and universities across the US, Canada, Mexico, Japan, ECWMF, and Russia. The main objective of Winter T-PARC is to understand how perturbations from the tropics, Eurasia and polar fronts evolve through the waveguide and turn into high impact weather events. Adaptive observations by manned aircrafts (NOAA G-IV and US Air force C-130s) and enhanced Russian Rawainsonde network over data sparse regions have been deployed. Non-adaptive aircraft measurements over the Pacific Rim and part of India were also deployed through E-AMDAR program. Observational data has been assimilated by all operational centers to improve real time numerical weather prediction. Post field studies will focus on aspects such as: -scale storm structure, data impact on forecast and analysis, dry and moist processes that affect the formation and propagation of perturbations, error growth, socio-economic applications such as costs and benefits of improved forecasts and their use by the public for high impact weather events.

Attendees:

Yoshio Asuma , Zoltan Toth, Rolf Langland, Edmund Chang, Jack Parrish, Paul Flaherty, Chris Doyle, Alexander Kats, David Novak, Warren Blier, Cihan Sahin, David Richardson, Tim Hewson, Sharan Majumdar, Martin Weissmann, Dave Burridge, Pierrer Gauthier, Jim Caughey, Pat Harr, Tetsuo Nakazawa, Craig Bishop, Roger Sanders (UK), Barry Choy

Agenda

8:30 am Meeting starts

Introduction

8:30 am Overview of previous day THORPEX meeting -Tom Hamill
8:45 am Overview of the T-PARC Program - Yucheng Song

Platforms and operations

9:00 am G-IV operation during winter T-PARC – Jack Parrish and Paul Flaherty
9:20 am C-130s operation during winter T-PARC - Jon Talbot
9:40 am Experience of organizing additional/adaptive radiosonde ascents– Alexander Kats
10:00 – 10:20 am BREAK

Moist process and wave packet studies

10:20 am Linkages between Weather Systems over the Pacific and Arctic Regions, and importance of the Moisture Process – Yoshio Asuma
10:50 am Wave packet – Edmund Chang (TBD)
11:30 am – 1:00 pm LUNCH

High Impact weather events evaluation

1:00 pm Evaluation of the winter T-PARC by data denial experiments – Yucheng Song
1:30 pm Evaluation of the winter T-PARC data by NRL adjoint method— Rolf Langland

Socio-economical impact studies

2:00 pm Winter Olympics Demo project - Chris Doyle

Summer T-PARC

2:30 pm Review of summer T-PARC - Tetsuo Nakazawa

3:10 – 3:30 pm BREAK

Adaptive targeting technique

3:30-5:00 pm Discussions
5:00 MEETING ADJOURN

Potential invitees:

NCEP: Bo Cui; Malaquias Pena, Dingchen Hou; Mozheng Wei; Yucheng Song; Yuejian Zhu; Bill Lapenta, Dave Parrish.

ESRL: Gary Wick, Zoltan Toth, Jeff Whitaker, Tom Hamill, Paul Schultz, Isidora Jankov, Jian-Wen Bao, Evelyn Grell, Marty Ralph, Randy Dole, Bill Neff, Stan Benjamin, Steve Weygandt, Steve Koch, Yuanfu Xie

NWS & NOAA Headquarters: Roger Pierce, Tony Eckel, Don Berchoff

MDL: Bob Glahn, Matt Peroutka, or Kathryn Gilbert

OU: Xuguang Wang

NCAR: Bill Kuo (DTC)

Texas A&M: Istvan Szunyogh (Int'l THORPEX PDP committee)

International: Pierre Gauthier (UQAM, THORPEX DAOS committee); David Burridge (International THORPEX IPO)

NRL: Jim Hansen (US THORPEX); Carolyn Reynolds (HFIP); Craig Bishop.